



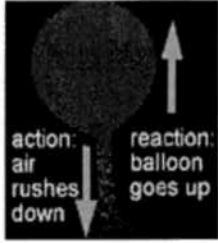



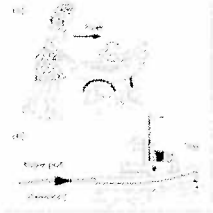

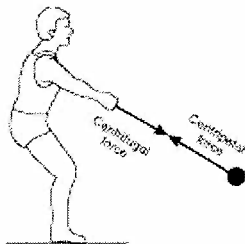
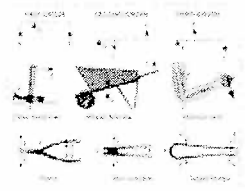
# Force and Motion

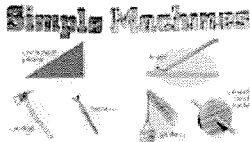
Name \_\_\_\_\_ Date \_\_\_\_\_ Bell \_\_\_\_\_

Please define and illustrate the following terms:

	Written Definition	Illustration (a pictorial representation to help you recall the definition)
1. Friction Page 324	The force that one object exerts on another when 2 objects rub against each other.	
2. Inertia page 316	The tendency of an object to resist change in its motion	
3. Newton's first law of motion Page 316	An object at rest will remain at rest or an object in motion will remain in motion unless acted upon by an outside source.	
4. Newton's second law of motion Page 320	Net force on an object is equal to the produce of its acceleration and its mass	

<p><b>5. Newton's third law of motion</b> Page 332</p>	<p>If one object exerts a force on another object then the 2<sup>nd</sup> object exerts a force of equal strength in the opposite direction</p>	 <p>The diagram shows a balloon with a downward arrow labeled 'action: air rushes down' and an upward arrow labeled 'reaction: balloon goes up'.</p>
<p><b>6. Power</b> Page 426</p>	<p>Rate at which work is done or the amount of work done in a unit of time</p>	$P = w/t$
<p><b>7. Speed</b> Page 286</p>	<p>The distance an object travels per unit of time</p>	$S = d/t$
<p><b>8. Velocity</b> Page 289</p>	<p>Speed in a given direction</p>	 <p>A black and white photograph of a cheetah in a running pose.</p>
<p><b>9. Work</b> Page 374</p>	<p>When you exert a force on the object that causes the object to move</p>	$\text{Work} = f * d$
<p><b>10. Acceleration</b> Page 302</p>	<p>The rate at which velocity changes</p>	$A = \frac{V_f - V_i}{t}$

<p><b>11. Force</b> <b>Page 312</b></p>	<p><b>A push or a pull</b></p>	
<p><b>12. Average Speed</b> <b>Page 287</b></p>	<p><b>Divide the total distance traveled by the total time</b></p>	<p><b><math>S = d/t</math></b></p>
<p><b>13. Balanced forces</b> <b>Page 314</b></p>	<p><b>Equal forces acting on one object in opposite directions</b></p>	
<p><b>14. Centripetal Force</b> <b>Page 339</b></p>	<p><b>Any force that causes an object to move in a circle</b></p>	
<p><b>15. Efficiency</b> <b>Page 382</b></p>	<p><b>The output work to the input work times 100 written as a percent</b></p>	<p><b><math>\frac{\text{Output work}}{\text{Input work}} * 100\%</math></b></p>
<p><b>16. Effort Force</b> <b>Page 379</b></p>	<p><b>Force exerted on the machine</b></p>	

<b>17.Joule</b> <b>Page 377</b>	<b>The amount of work you do when you exert a force of 1 Newton to move an object a distance of 1 meter</b>	
<b>18.Machine</b> <b>Page 378</b>	<b>A device with which you can do work in a way that is easier or more effective</b>	
<b>19. Mechanical Advantage</b> <b>Page 381</b>	<b>The number of times a force exerted on a machine multiplied by the machine</b>	$MA = \frac{\text{output force}}{\text{Input force}}$
<b>20. Momentum</b> <b>Page 335</b>	<b>The produce of mass and velocity</b>	$M = \text{mass} * \text{velocity}$
<b>21.Resistance Force</b> <b>Page 632</b>	<b>The opposition to the movement of charges flowing through a material</b>	